

Rabbit RAG2 Polyclonal Antibody | anti-RAG2 antibody

RAG2 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA327123	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

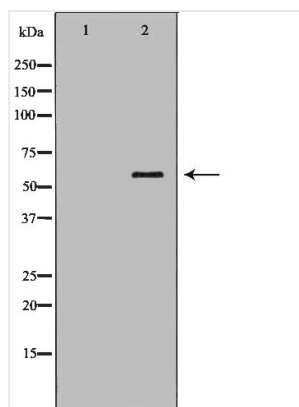
PRODUCT SYNONYMS

RAG2; Polyclonal Antibody; RAG2 Antibody; RAG 2; RAG-2; RAG2_HUMAN; Recombination activating gene 2; V(D)J recombination activating protein 2; V(D)J recombination-activating protein 2; anti-RAG2 antibody

PRODUCT SPECIFICATIONS

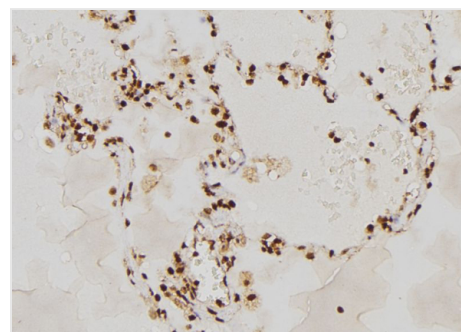
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	RAG2 antibody detects endogenous levels of total RAG2
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific).
Form/Format	Liquid; Rabbit IgG Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	527
Applicable Applications for anti-RAG2 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human RAG2, corresponding to a region within N-terminal amino acids.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of Hepg2 whole cell lysates, using RAG2 Antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA327123 at 1/100 staining Human lung tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-RAG2 antibody	Description: This gene encodes a protein that is involved in the initiation of V(D)J recombination during B and T cell development. This protein forms a complex with the product of the adjacent recombination activating gene 1, and this complex can form double-strand breaks by cleaving DNA at conserved recombination signal sequences. The recombination activating gene 1 component is thought to contain most of the catalytic activity, while the N-terminal of the recombination activating gene 2 component is thought to form a six-bladed propeller in the active core that serves as a binding scaffold for the tight association of the complex with DNA. A C-terminal plant homeodomain finger-like motif in this protein is necessary for interactions with chromatin components, specifically with histone H3 that is trimethylated at lysine 4. Mutations in this gene cause Omenn syndrome, a form of severe combined immunodeficiency associated with autoimmune-like symptoms. Function: Core component of the RAG complex, a multiprotein complex that mediates the DNA cleavage phase during V(D)J recombination. V(D)J recombination assembles a diverse repertoire of immunoglobulin and T-cell receptor genes in developing B and T-lymphocytes through rearrangement of different V (variable), in some cases D (diversity), and J (joining) gene segments. DNA cleavage by the RAG complex occurs in 2 steps: a first nick is introduced in the top strand immediately upstream of the heptamer, generating a 3'-hydroxyl group that can attack the phosphodiester bond on the opposite strand in a direct transesterification reaction, thereby creating 4 DNA ends: 2 hairpin coding ends and 2 blunt, 5'-phosphorylated ends. The chromatin structure plays an essential role in the V(D)J recombination reactions and the presence of histone H3 trimethylated at 'Lys-4' (H3K4me3) stimulates both the nicking and hairpinning steps. The RAG complex also plays a role in pre-B cell allelic exclusion, a process leading to expression of a single immunoglobulin heavy chain allele to enforce clonality and monospecific recognition by the B-cell antigen receptor (BCR) expressed on individual B-lymphocytes. The introduction of DNA breaks by the RAG complex on one immunoglobulin allele induces ATM-dependent repositioning of the other allele to pericentromeric heterochromatin, preventing accessibility to the RAG complex and recombination of the second allele. In the RAG complex, RAG2 is not the catalytic component but is required for all known catalytic activities mediated by RAG1. It probably acts as a sensor of chromatin state that recruits the RAG complex to H3K4me3 (By similarity). Subunit Structure: Component of the RAG complex composed of core components RAG1 and RAG2, and associated component HMGB1 or HMGB2. Similarity: The atypical PHD-type zinc finger recognizes and binds histone H3 trimethylated on 'Lys-4' (H3K4me3). The presence Tyr-445 instead of a carboxylate in classical PHD-type zinc fingers results in an enhanced binding to H3K4me3 in presence of dimethylated on 'Arg-2' (H3R2me2) rather than inhibited. The atypical PHD-type zinc finger also binds various phosphoinositides, such as phosphatidylinositol 3, 4-bisphosphate binding (PtdIns(3, 4)P2), phosphatidylinositol 3, 5-bisphosphate binding (PtdIns(3, 5)P2), phosphatidylinositol 4, 5-bisphosphate (PtdIns(4, 5)P2) and phosphatidylinositol 3, 4, 5-trisphosphate binding (PtdIns(3, 4, 5)P3) (By similarity). Belongs to the RAG2 family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	151301080
NCBI GeneID	5897
NCBI Accession #	NP_000527.2
NCBI GenBank Nucleotide #	NM_000536.3
UniProt Accession #	P55895; Q8TBL4; A8K9E9
Molecular Weight	59kDa
NCBI Official Full Name	V(D)J recombination-activating protein 2
NCBI Official Synonym Full Names	recombination activating 2
NCBI Official Symbol	RAG2
NCBI Official Synonym Symbols	RAG-2
NCBI Protein Information	V(D)J recombination-activating protein 2
UniProt Protein Name	V(D)J recombination-activating protein 2
UniProt Gene Name	RAG2
UniProt Synonym Gene Names	RAG-2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/rag2-antibody-immunohistochemistry-western-blot-elisa/327123>